



DEPARTMENT OF THE NAVY  
NAVAL EDUCATION AND TRAINING CENTER  
NEWPORT, RHODE ISLAND 02841-5000

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IN REPLY REFER TO:  
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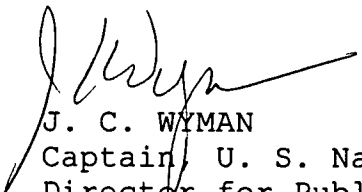
Mr. Eric Beck /  
Rhode Island Department of Environmental Management  
Division of Waste Management  
235 Promenade Street  
Providence, RI 02908-5767

Dear Mr. Beck:

We are submitting an addendum to the Tank Farm 4 work plan that addresses the tank demolition procedures for Tank Farm 5. We are requesting confirmation of your concurrence with the demolition procedures and approval of the work plan addendum.

Our point of contact for questions or additional information is Mr. Raymond Roberge at (401) 841-3735.

Sincerely,

  
J. C. WYMAN  
Captain, U. S. Navy  
Director for Public Works  
By direction of the Commander

Copy to:  
NORTHNAVFACENGCOM Lester PA (Code 1811/B. Helland)

2703

U.S. NAVY NORTHERN DIVISION  
REMEDIAL ACTION CONTRACT (RAC)  
CONTRACT NO. N62472-94-D-0398  
DELIVERY ORDER NO. 0013D

FINAL

TANK FARM #5 DEMOLITION WORK PLAN  
DEVELOPED FROM  
TANK FARM #4 WORK PLAN DATED MAY 20, 1996  
AND  
TANK FARM #4 DEMOLITION WORK PLAN ADDENDUM DATED APRIL 28, 1997

NAVY EDUCATION AND TRAINING CENTER (NETC)  
NEWPORT, RHODE ISLAND

November 1997

Prepared by

Foster Wheeler Environmental Corporation  
2300 Lincoln Highway East, Suite 200  
Langhorne, PA 19047

<u>Revision</u>	<u>Date</u>	<u>Prepared By</u>	<u>Approved By</u>	<u>Pages Affected</u>
1	11/24/97	Jon Cary JC	Art Holcomb, PE, CIH	i, 1, 8, Attmt. 1 pg. 1

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The following Tank Farm 5 Demolition Work Plan and associated plans were developed by Foster Wheeler Environmental Corporation (FWENC) as addendums to Tank Farm 4 Demolition plans and were not intended to be stand alone documents except for the site Health and Safety Plan (Attachment 1). The Tank Farm 5 Demolition Work Plan and associated plans (Attachments 1 through 5) provide primary changes/pertinent information only. All other information from the Tank Farm 4 Work Plan and associated plans is to be applied as applicable.

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## **1.0 INTRODUCTION**

### **1.1 Project Background**

This section presents background information concerning the location and description of the tanks, a summary of the site and operational history of Tank Farm 5, and a summary of previous investigations. Pertinent construction details concerning the tanks and associated piping/equipment are also presented.

## **2.0 SITE DESCRIPTION**

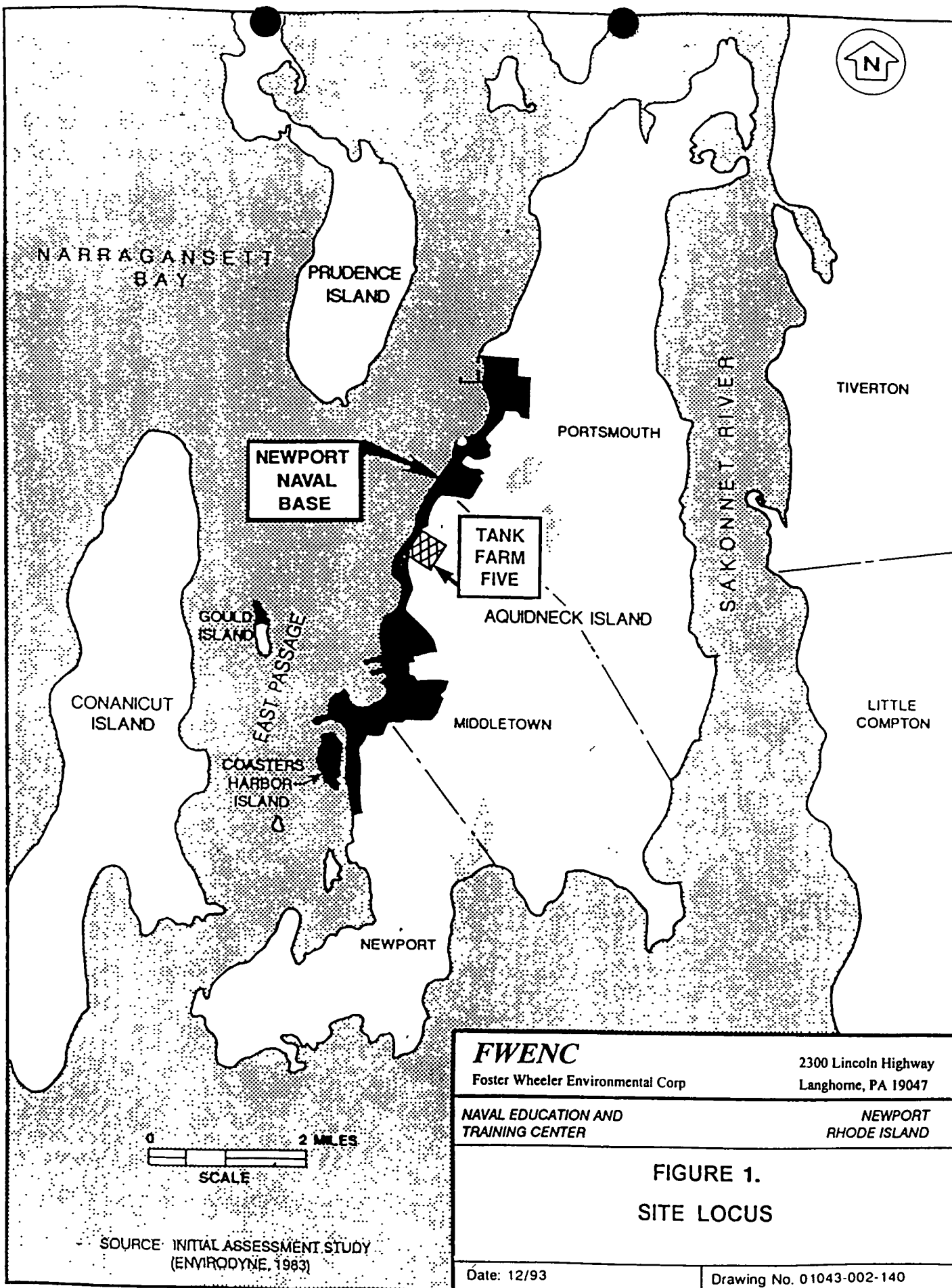
### **2.1 Site Location**

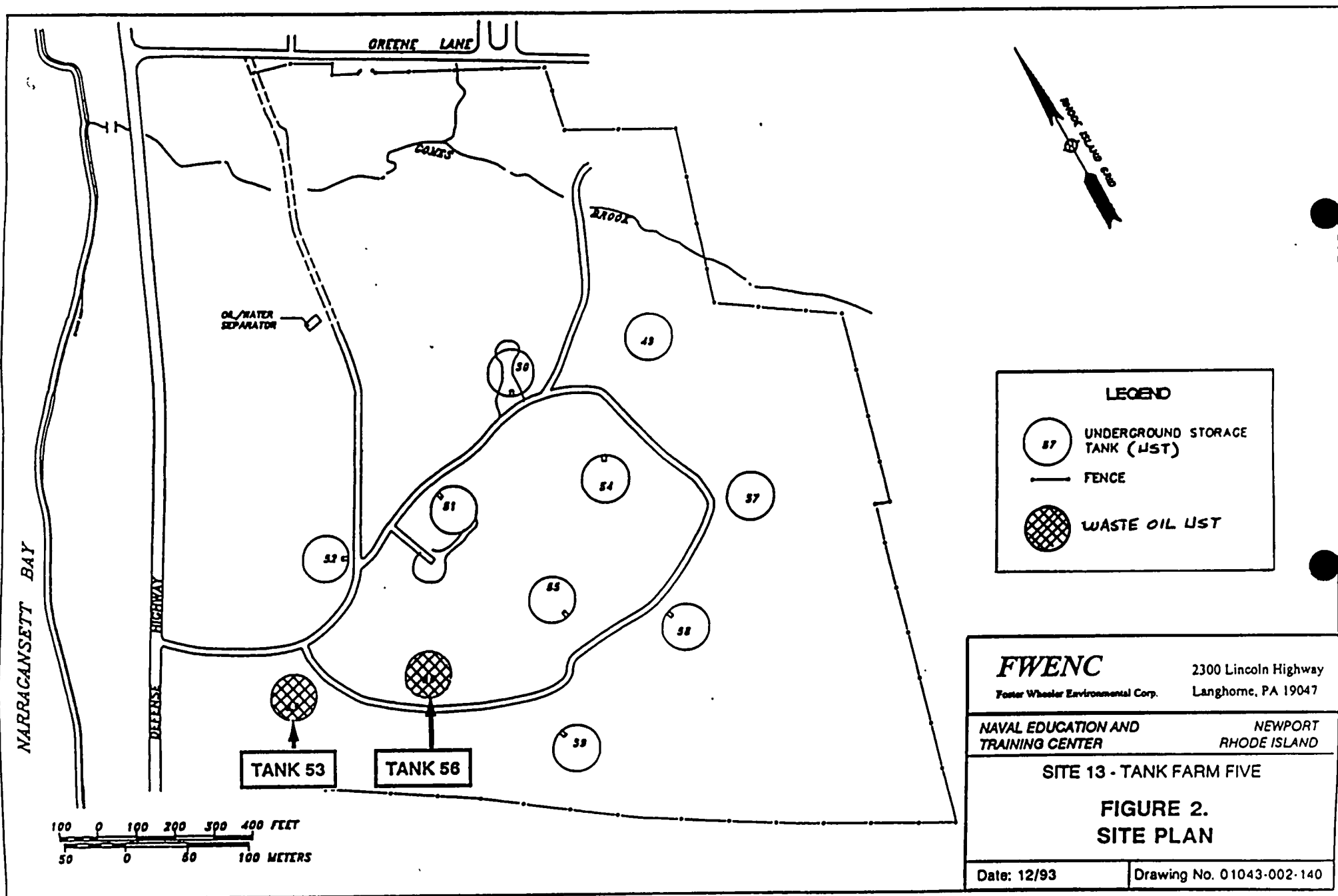
The Naval Education and Training Center (NETC-Newport) is located in the towns of Newport, Middletown, and Portsmouth, Rhode Island, approximately 25 miles southeast of Providence (Figure 1). Tank Farm 5 is situated in the north central portion of the NETC, in Middletown (Figure 1). Storage tanks are located as shown on the Tank Farm 5 loop road (Figure 2).

As depicted on the figures listed above, Tank Farm 5 is bordered by Greene Lane to the north and a cemetery to the south. The eastern edge of the tank farm is bounded by a residential area. Residential areas are also located within 500 feet to the north and south of Tank Farm 5. The western side of the tank farm is bordered by the Fire Fighting Training Facility, Defense Highway (also referred to as Burma Road), the Penn Central Railroad right-of-way, and open space owned by the Navy. Beyond these properties to the west is Narragansett Bay, located approximately 750 feet down gradient of the tank farm.

### **2.2 Site History**

Tank Farm 5 was constructed as a war measure from 1942 to 1943 on property owned by the Navy to support the fueling requirements of the Newport-based Atlantic Fleet (TRC, 1994). The tank farm consists of eleven 2.52 million-gallon concrete underground storage tanks (USTs). These tanks were used to store heavy fuel oils and No. 2 fuel oils from World War II until 1974. By





1974, all tanks, with the exception of Tanks 53 and 56, which were used to store waste oils, were taken out of service. Tanks 53 and 56 were used to store waste oils from 1975 until 1982. In April of 1991 Tanks 53 and 56 were cleaned and ballasted with water by OHM Remediation Services, Inc (OHM).

The other nine tanks in the farm contained residual virgin petroleum product, water, and sludge until cleaning and closure of these tanks was initiated by the Navy in 1994.

As a result of amendments to State of Rhode Island regulations promulgated in 1993 concerning the management of underground petroleum storage facilities, tanks used to store fuel oils became subject to state UST closure requirements. On May 3, 1995, the Navy filed an application with RIDEM to permanently close the tanks at Tank Farm 5. Decommissioning/removal of piping and equipment, tank cleaning, and tank ballasting was conducted by OHM from August 1994 to September 1995. Closure reports for the tanks located at Tank Farm 5 were submitted to RIDEM by the Navy from July to October 1995.

### **3.0 PROJECT ORGANIZATION**

#### **3.1 Project Staffing**

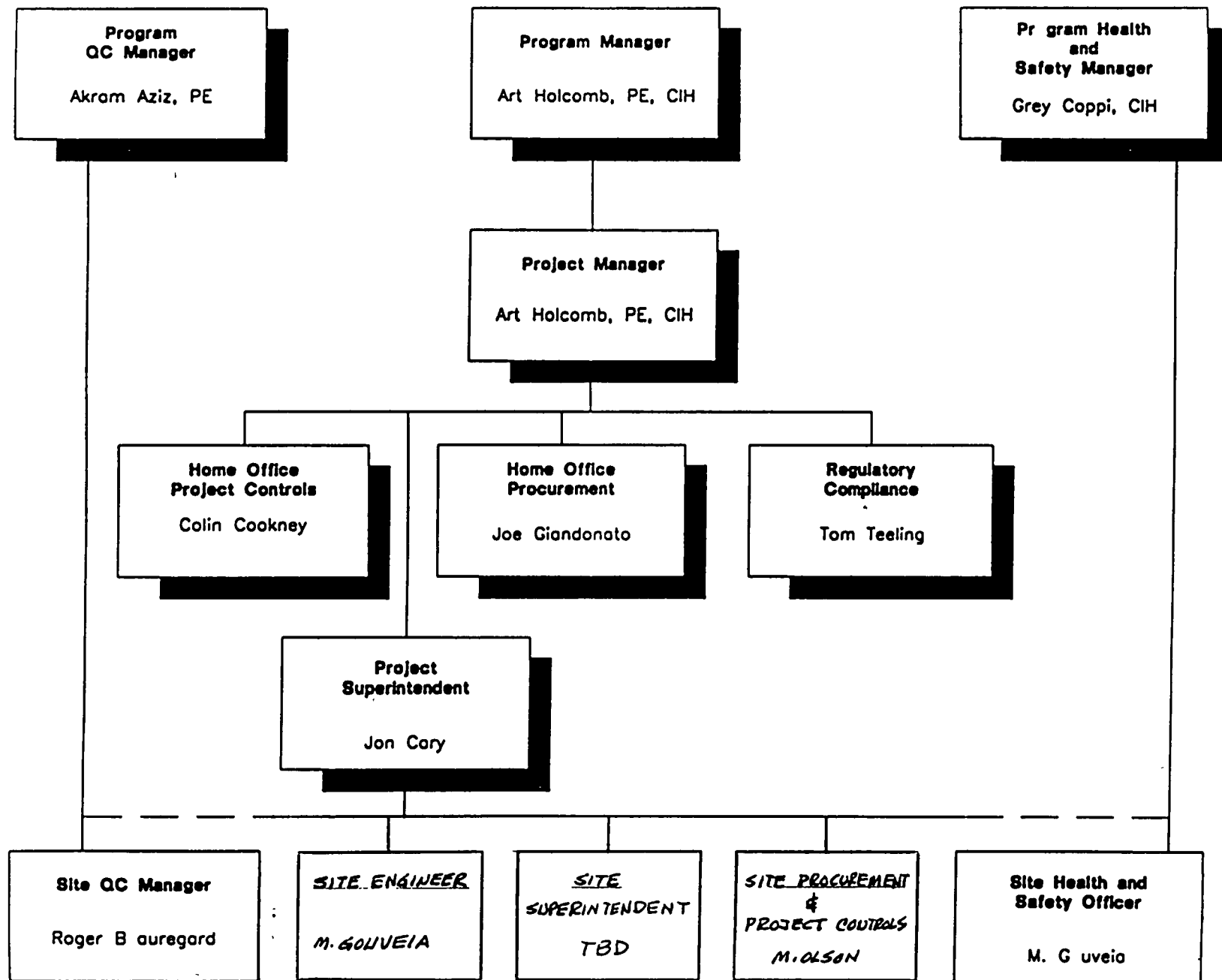
Figure 3-1 depicts the FWENC project organization for this delivery order. The organization represents the direct line of authority during project execution. Figure 3-2 illustrates the overall program organizational chart, which depicts the communication paths between the Navy team and FWENC.

#### **3.2 Permitting**

FWENC assumes that all environmental permits will be obtained by the Navy. FWENC will prepare the necessary documentation to support applications. The following permits are expected to be required:

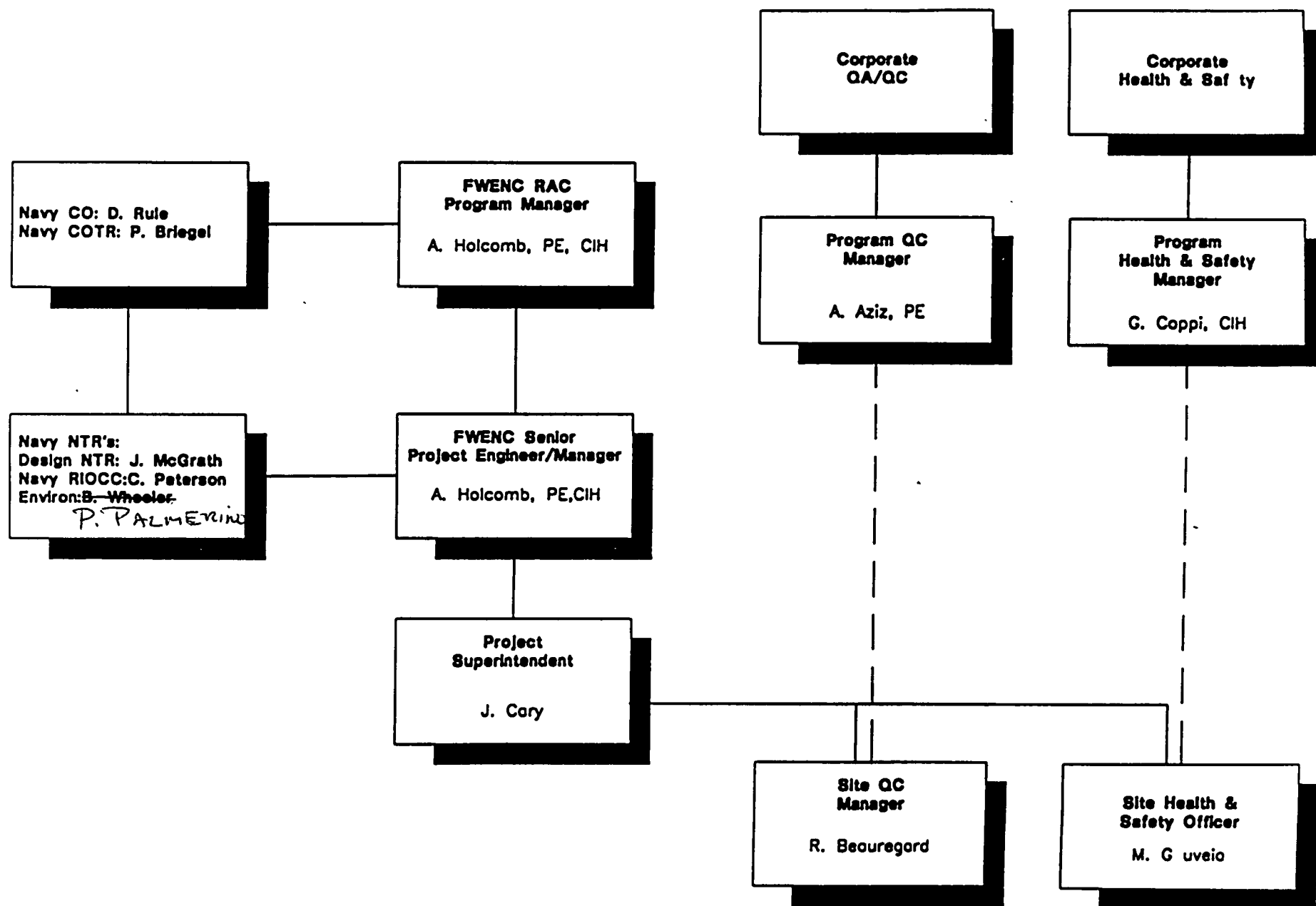
- Newport POTW Discharge Permit - a single application to cover both sanitary and process water discharge.
- FWENC assumes that RIDEM wetland approval will not be required.
- The Coastal Resources Management Council (CRMC) Consistency Determination will be submitted for information only and requires no approval. The required information will be based upon work already completed at Tank Farm 5.
- FWENC assumes that air permitting will not be required.

# Figure 3-1 Foster Wheeler Project Organizational Chart



# Figure 3-2

## Navy / FWENC Organization Chart



### **3.3 Work Package Preparation**

- Specific work packages will not be developed as the basic activities are described in the tank demolition section (paragraph 4.3.9) of this work plan addendum.

Statements of Work (SOWs) will be developed for subcontracted services as required.

#### ***4.3.9 Tank Demolition***

The following documents are presented to address primary changes that are applicable to the Tank Farm 5 demolition activities. The following documents are not stand alone documents and are intended to supplement information obtained from the Tank Farm 4 documents:

- Attachment 1 Site Health and Safety Plan (SHSP)
- Attachment 2 Quality Control Plan (QCP) with Submittal Register
- Attachment 3 Waste Management Plan (WMP)
- Attachment 4 Sampling and Analysis Plan (SAP)
- Attachment 5 Environmental Protection Plan (EPP) / Soil Erosion and Sedimentation Control Plan (SESCP) / Spill Prevention Control and Countermeasure Plan (SPCCP).

RIDEM has conducted closure inspections and all Tank Farm 5 documentation has been submitted to verify the completion of the cleaning operation and ballasting of the tanks with potable water by OHM. FWENC assumes the storage tanks are ready for demolition based upon work previously completed (tank cleaning, removal and disposal of piping and equipment from tank, and water ballast). The demolition objective is to demolish and separate the tank roof from the tank walls, and pulverize the interior columns, while maintaining the basic structural integrity of the tank floor and side walls. Demolition activities are described in the following paragraphs.

##### ***4.3.9.1 Site Preparation***

Borrow soil stockpile areas will be created as required, adjacent to the tanks for temporary storage of stockpiled material when direct dumping is not available. These stockpile areas will consist of a cleared area with down gradient perimeter silt fencing, as required.

##### ***4.3.9.2 Perimeter Clearing and Excavation***

The perimeter of each tank will be cleared approximately 20 feet. All cleared vegetation will be disposed of off-site. This clearing will allow access to excavate a trench with 1V:1H side slopes from the perimeter existing grade to the edge of the tank roof and expose a portion of the tank roof. This excavation will create a stable slope around the tank, so that upon the collapse of the tank roof the surrounding soil does not fall into the tank void area. The tank perimeter soils will

be excavated and screened for volatiles using a FID and visually inspected for any staining. If field screening results indicate a concentration greater than 100 ppm or if soil is stained, then the soil will be stockpiled for further analytical testing. Potentially contaminated soil will be composite sampled and analyzed for TPH in accordance with SW-846 method 8015 at a frequency of one sample per 400 cubic yards. Soils with concentrations greater than 100 ppm will be disposed in accordance with RIDEM waste regulations. Potentially clean soils will be tested for TPH, TAL and TCL compounds in accordance with SW-846 methods at a frequency of one composite sample per 500 cubic yards. Stockpiled soils which have been confirmed to be clean by FWENC and concurrence by the Navy will be used as backfill within the tanks.

Test pit sampling, as performed at Tank Farm 4, will not be performed at Tank Farm 5 because sludge disposal is not suspected at Tank Farm 5. In addition, the level of residual contamination remaining in the concrete is assumed to be similar to that at Tank Farm 4, making chip sampling unnecessary.

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#### ***4.3.9.3 Tank Demolition Preparation***

A 15 foot layer of sand will be placed into the tank to absorb the shock from the collapsing tank roof and to fill the voids between the tank floor and the tank roof. The sand will be placed through the existing access cut-outs by direct dumping and/or the use of conveyors after the tank ballast water has been removed. The water will be removed and processed through a Water Treatment System (WTS) to meet the established POTW acceptance criteria, prior to discharge to the POTW system.

Three inch diameter holes will be drilled at the high water elevation, every 40 feet on center, through the side walls of the tank. These holes will allow drainage at this elevation. These high water elevation drainage holes will be required for every tank. The elevation of the drainage holes will be determined at the time of drilling.

To ensure a clean separation from the side walls and allow the tank roof to collapse straight down, the tank roof will be saw-cut 8 inches deep, in 10 foot long intervals around the perimeter of the tank roof. In between the 10 foot intervals will be 4 foot sections of uncut roof. These sections will have two 1.5 inch diameter blast holes drilled 8 inches deep into the tank roof.

Each of the interior structural columns will have 11 horizontal blast holes drilled. These blast holes will be drilled 18 inches on center, along the column vertical axis. All column blast holes will be 16 inches in depth and 1.5 inches in diameter. A manlift, staging or other devices placed into the tank, will be utilized to gain position for tank interior blast hole drilling.

#### ***4.3.9.4 Seismic Monitoring***

All residents within a 1000 foot radius of the demolition activities will be contacted and informed of the demolition activity and schedule. A request will be made to allow an interior inspection of residences to establish existing conditions. Photographic and video records of exterior structures, side walks, streets and curbs will be made at this time. Visual surveys will be done prior to each blast event. Seismic monitors will be set up at intervals around the blast area and at the nearest structure to the blast area to ensure a comprehensive record of conditions prior to, during and after each blast event. A post demolition inspection, with field work comparisons to pre-demolition conditions, will be conducted after the first blast event. The results of the initial comparison will determine the need or frequency of post blast surveys to be conducted. A detailed seismic monitoring plan with location sketches will be provided by the seismic monitoring contractor.

#### ***4.3.9.5 Tank Demolition***

The mechanical theory for imploding the tanks is to stress the center of the tank roof which will be held up for a fraction of a second (due to time delay charges) by a few supporting columns until the stress is at its greatest. Then the few remaining support columns will be eliminated at the critical moment, thus allowing the concrete roof to fall free into the tank onto the sand bedding.

A subcontractor vehicle will be dedicated for the storage of the explosives on site for the scheduled implosion date. The transportation, storage and handling of explosives will be per applicable Federal, State and Local regulations.

The blast area perimeter will be clearly defined with the access strictly controlled. Only approved personnel will be allowed access to the blast area. All approved personnel will sign an entry log in and out of the blast area to allow the blaster in charge to take a head count in the event of an emergency. A safe area will be established for personnel in the event of an emergency or evacuation.

The handling of all explosives will be supervised by the blaster in charge. All drilled holes will be checked and, if blocked, will be cleared prior to loading. The explosives will be loaded into the prepared holes, and the electric detonators will be inserted into the explosives. The explosives will be secured by stemming, a clay material packed in the open end of the drilled hole.

Upon completion of the loading operation, wiring of the blasting series will begin. Each blasting series will be checked for continuity by use of a blasters multi-meter and electrical shunts. After all the series have been tested, the individual blasting series will be attached to the firing line.

The blaster will conduct a walk through inspection of the tank and blast area. Two hours prior to the blast, the area of the blast will be cleared of all non-essential personnel and no one will be permitted closer than the pre-determined safe viewing area. Immediately prior to the blast, the

firing series will be checked to ensure continuity and resistance. They will be checked until the wiring is confirmed as ready, at which time they will be connected to the blast machine.

The following code of audible blasting signals shall be viewed and posted on one or more conspicuous places at the blasting operation area:

- Three (3) long horn blasts = 15 minutes to explosive blast.
- Two (2) long horn blasts = 2 minutes to explosive blast.
- One (1) long horn blast = 1 minute to explosive blast.
- Two (2) long horn blasts = All clear.

All employees will be required to familiarize themselves with the code and conform to it. Danger signs will also be placed at suitable locations.

Before a blast is fired, the warning signals will be given by the blaster in charge, who has made certain that all surplus explosives are in a safe place and all employees, vehicles, and equipment are at a safe distance, or under sufficient cover. Flagmen will be safely stationed on highways passing through the danger zone so as to stop traffic during blasting operations. It will be the duty of the blaster to fix the time of blasting. Before firing an underground blast, warning will be given, according to the above mentioned schedule. All possible entries into the blasting area including entrances to any working place where drift or raise occur will be carefully guarded. The blaster will make sure that all employees are out of the blast area before firing the blast.

Following the all clear signal, the seismic data will be reviewed and a post blast inspection will be conducted of the surrounding area by the blaster in charge. A post-blast survey will also be conducted by the seismic monitoring subcontractor for the 1000 foot radius from the blast area.

The tanks will be imploded individually. The results of the initial blast event will be reviewed along with the data collected by the seismic monitoring subcontractor. A determination will be made, based on the results, as for the need for modifications and the frequency of the post-blast survey. The whole blast procedure from the test signal to the all clear signal is expected to take less than two hours.

Access for potable water will be set up around each tank location as a dust control measure. The blast area will be wet down prior to the blast and water will be available after the blast, if necessary.

#### ***4.3.9.6 Water Treatment***

Water treatment operations will be maintained during demolition activities. The system will be unmanned and have the ability to treat the water at the discharge flow rate of 300 gpm. Any maintenance will be done during the day shift. The system, will treat the ballast waters which will be removed from the tanks and pump rooms as the sand is placed.

#### ***4.3.9.7 Backfilling***

The remainder of the tanks will be backfilled with clean fill. Backfill materials will be classified as GW, GP, GC, SW, SP, SM or SC in accordance with the Unified Soil Classification System designations. Materials will be placed in the tanks to minimize breaching. FWENC will provide 6" topsoil for the finished earth surface and areas disturbed. Seed mix will be approximately red fescue (50%), Kentucky bluegrass (30%), annual ryegrass (20%) and clover (10%). Seeding will occur from 15 August to 15 October and/or 1 March to 30 April.

The backfill material will be unloaded adjacent to the tanks and be pushed into the tanks utilizing a large bull dozer. The fill will be pushed across the tank filling void areas. Backfill areas will be slightly mounded above the existing grade to compensate for settling. Upon completion of the backfilling process, the site will be surveyed and a survey monument will be set to identify the location of each demolished tank.

#### ***4.3.9.8 Post Demolition Soil Stability***

The remediated tank sites will have the subsurface conditions recorded such that foundation support can be designed and constructed in the future for site development as necessary. Backfill will be placed without additional compaction. Should compaction later be desired, the site can be prepared subsequently by dynamic compaction, provided that granular backfill is used.

Dynamic compaction involves dropping a heavy weight (10 to 40 tons) on the ground surface from a height (50 to 100 feet) with a large crane. The weight is usually dropped 6 to 10 times at each drop point, which is part of a drop point grid (7'x7' to 25'x25') established to uniformly compact the subgrade.

Heavy structures can be supported on piling with their tips on or above the in-place concrete tank bottom. The tank bottoms are understood to be founded on bedrock. Caissons, if used, would probably have to penetrate into the tank bottom. H-piles with points could be driven to final driving resistance in fallen concrete roof debris or to top of the concrete tank bottom. "Franki" piles could be driven to capacity above the tank bottom.

Since the tank walls are generally greater than 5 feet below the existing ground surface, and the future use of the land is not known at this time, the tank walls will be left at their existing grade. Future development can be supported on the remediated tank sites.

## **ATTACHMENT 1 SITE HEALTH AND SAFETY PLAN (SHSP)**

### **1.0 INTRODUCTION**

#### **1.1 Purpose**

This Site Health and Safety Plan (SHSP) addresses the health and safety practices that will be employed by all site workers participating in the Tank Farm 5 demolition activities at NETC-Newport.

#### **1.2 Scope**

This SHSP has been developed to address health and safety concerns during the demolition phase of Tank Farm 5 at NETC-Newport as a stand alone document.

- Site Health and Safety Plan (SHSP), dated November 1997.

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### **2.0 ACTIVITY HAZARD ANALYSES**

#### **2.1 Purpose**

Activity Hazard Analyses (AHAs) will be utilized to identify specific health and safety hazards associated with the demolition phases of work on the project and the methods to avoid, control and mitigate those hazards. The AHAs follow the guidance of the FWENC Corporate Program Manual HS 3-5. AHAs will be developed by the site health and safety officer (SHSO) and the Project Superintendent for demolition activities. Prior to starting work activities AHAs will be reviewed/approved by the project health and safety manager (PHSM). The AHAs will be used to train workers in proper safety procedures.

## **ATTACHMENT 2 QUALITY CONTROL PLAN (QCP)**

### **1.0 INTRODUCTION**

#### **1.1 Purpose and Content of the Quality Control Plan**

This Quality Control Plan (QCP) describes the organization, inspections, tests, procedures, and documentation necessary to complete the demolition phase of the project which complies with governing regulations and the Project Documents applicable to the remedial actions at Tank Farm 5 at NETC-Newport.

#### **1.2 Scope**

This QCP has been developed to address quality control documentation of activities during the demolition phase of Tank Farm 5 at NETC-Newport, as an addendum to the following Tank Farm 4 approved document(s):

- Final quality control plan, dated April 8, 1996.

##### ***1.2.5 Scope of Work***

- Submittal Register for Tank Farm 5 Demolition attached.

##### ***3.8.3.1 Quality Control Checklist***

A Quality Control Checklist (QCC) will be utilized to identify specific requirements associated with defined work activity features for the demolition phases of work on the project. The QCCs will be developed by the site QC manager for demolition activities prior to starting work activities.

SUBMITTAL REGISTER

Contract Number: N62472-94-D-0398 D.O. # 0013

Project Title: Tank Farm 5 Demolition at NETC

LOCATION: Newport, Rhode Island

CONTRACTOR: Foster Wheeler Environmental Corporation

CONTRACTOR ACTION									APPROVING AUTHORITY ACTION					CONTR	
SPEC SECTION NO.	RD NO. & TYPE OF SUBMITTAL-MATL OR PRODUCT	SPEC PARA NO.	CLASSIF/ AGENCY CO.	CONT OR AS REVR	TRACK CONTROL NO.	PLANNED SUBMITTAL DATE	ACT. CODE	DATE OF ACTION	DATE FWD TO APPR AUTH / DATE RECD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RECD FROM OTHER REVIEWER	ACT. CODE	DATE OF ACTION	MAILED TO CONTR / RECD FROM APPR AUTH	REMARKS
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	SD-18, Records	N/A	"G"												
	Demolition Work Plan Addendum	N/A	"G"												
	Health and Safety Plan (SHSP)	N/A	"G"												
	Quality Control Plan (QCP)	N/A	"G"												
	Submittal Register	N/A	"G"												Attachment to QC Plan
	Waste Management Plan (WMP)	N/A	"G"												Attachment to Work Plan
	Environmental Protection Plan (EPP)	N/A	"G"												Attachment to Work Plan
	Sampling and Analysis Plan (SAP)	N/A	"G"												Attachment to Work Plan
	Soil Erosion and Sedimentation Control Plan (SESCP)	N/A	"G"												Attachment to Work Plan
	Spill Prevention Control and Countermeasure Plan (SPOCP)	N/A	"G"												Attachment to Work Plan
	SD-18, Records														
	Demolition Subcontractor Work Plan	N/A	"G"												
	Demolition Subcontractor Personnel Qualifications	N/A	"G"												In Work Plan
	Demolition Subcontractor Engineering Calculations for Demolition/Explosives	N/A	"G"												In Work Plan
	Demolition Subcontractor Explosives Handling/Transportation and Storage	N/A	"G"												In Work Plan
	Demolition Subcontractor Health and Safety Plan	N/A	"G"												In Work Plan

\* Navy Note:  
Approved by:  
G: Contracting Officer  
Blank: CQC Manager

\* NASA Note:  
Approved by:  
Blank: Contracting Officer

\* Army Note:  
Classification:  
GA: Gov't Approval  
FIO: For Info ONLY

ACTION CODES: NR: Not Reviewed AN: Approved as Noted A: Approved  
RR: Disapproved; Revise and Resubmit (Others may be prescribed by the Transmittal Form)

Contract Number: N62472-94-D-0398 D.O. # 0013

**SUBMITTAL REGISTER**  
Project Title: Tank Farm 5 Demolition at NETC

LOCATION: Newport, Rhode Island

CONTRACTOR: Foster Wheeler Environmental Corporation

CONTRACTOR ACTION										APPROVING AUTHORITY ACTION				CONTR	
SPEC SECTION NO.	SD NO & TYPE OF SUBMITTAL-MATL OR PRODUCT	SPEC PARA NO.	CLASSIF/ APPR BY CO *	GOVT OR A/E REVR	TRANS CONTRL NO.	PLANNED SUBMITTAL DATE	ACT. CODE	DATE OF ACTION	DATE FWD TO APPR AUTH / DATE RECD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RECD FROM OTHER REVIEWER	ACT. CODE	DATE OF ACTION	MAILED TO CONTR / RECD FROM APPR AUTH	REMARKS
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	SD-18, Records														
	Seismic Monitoring Work Plan	N/A	"G"												In Work Plan
	SD-18, Records														
	Close-out Report	N/A	"G"												In Work Plan

\* Navy Notes:  
Approved by:  
G: Contracting Officer  
Blank: CQC Manager

\* NASA Notes:  
Approved by:  
Blank: Contracting Officer

\* Army Notes:  
Classification:  
GA: Gov't Approval  
FRO: For Info ONLY

ACTION CODES:    NR: Not Reviewed                    AN: Approved as Noted                    A: Approved  
                             ER: Disapproved, Revise and Resubmit (Others may be prescribed by the Transmittal Form)

**ATTACHMENT 3  
WASTE MANAGEMENT PLAN (WMP)**

**1.2 Project Objective**

This Waste Management Plan (WMP) has been prepared for the demolition phase being conducted at Tank Farm 5 located at NETC-Newport as an addendum to the following Tank Farm 4 approved document.

- Final Waste Management Plan, dated May 20, 1996.

***2.1.1 Regulatory Specialist***

For the purposes of this project, the responsibilities of the Regulatory Specialist will be fulfilled by Mr. Tom Teeling. He will be supported by regulatory specialists in the FWENC Langhorne, Pennsylvania office. Mr. Teeling is responsible for implementation of this WMP.

***2.1.2 Project Manager***

The Project Manager, Mr. Art Holcomb, is responsible for project communications and management, scheduling and planning, and organizing the work in a manner that minimizes the generation of project derived waste, and for assuring that the work is carried out in accordance with the WMP, and for alerting the regulatory specialist(s) to any unforeseen or unplanned waste generation or waste management activity.

## **ATTACHMENT 4 SAMPLING AND ANALYSIS PLAN (SAP)**

### **1.0 PROJECT DESCRIPTION**

#### **1.1 Purpose**

This sampling and analysis plan (SAP) is intended to be a procedural guide for all FWENC personnel and subcontractors involved in sampling and analysis data acquisition while implementing remedial actions for Tank Farm 5 at NETC-Newport. The SAP serves as an addendum to the following Tank Farm 4 approved document:

- Final Sampling and Analysis Plan, dated May 17, 1996.

### **2.0 SAMPLING AND ANALYSIS DATA OBJECTIVES**

This section gives an overview of sampling and analysis activities and their data objectives. Analytical levels used in data collection are also identified, including the analytical levels that will be utilized for this project.

#### **2.1 Generalized Scope of Work**

Sampling and analysis activities for this project will include the following:

- Tank contents gauging in order to determine volumes of water.
- Sampling and analysis of water treatment plant effluent in order to ensure that the effluent discharge is in compliance with POTW requirements.
- Sampling and field screening of soils during site excavation activities in order to segregate soils for future use as backfill or for disposal.
- Sampling and analysis of suspected contaminated soils generated during site excavation activities in order to characterize the soil for disposal purposes.
- Sampling and analysis of off-site borrow source soils in order to ensure that backfill materials meet site requirements.

Other activities include sampling and analysis for health and safety related air monitoring. Sampling and analysis for these items are discussed in detail in the SHSP.

**ATTACHMENT 4 *cont.***  
**SAMPLING AND ANALYSIS PLAN (SAP)**

***3.3.3 Treatment Plant Sampling***

The following information was extracted from a Newport POTW/Navy letter.

POTW discharge limits:

- Total Petroleum Hydrocarbons (TPH) - 2 parts per million.
- Lead - 100 parts per billion.

***3.3.4.2 Sampling and Analyses***

Segregated soil sampling and analysis will be in accordance with Tank Farm 5 Demolition Work Plan (paragraph 4.3.9.2).

**ATTACHMENT 5  
ENVIRONMENTAL PROTECTION PLAN (EPP)**

**1.0 PURPOSE**

This Environmental Protection Plan (EPP) is required by the contract for the demolition phase to be conducted by FWENC at the NETC Tank Farm 5 located in Middletown, Rhode Island as an addendum to the following Tank Farm 4 approved documents:

- Final Environmental Protection Plan, dated May 20, 1996.
- Final Erosion and Sedimentation Control Plan, dated May 20, 1996.
- Final Spill Prevention Control and Countermeasure Plan, dated May 20, 1996.

FWENC identified three areas of concern to be included in the EPP. These areas are soil erosion and sedimentation control, noise and light abatement, and spill prevention and discharge control.